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The oldest brachiopods from the lower Cambrian of South Australia

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The morphology and organophosphatic shell structure of the paterinate brachiopod *Askepasma* is documented using new and previously collected specimens from the lower Cambrian of South Australia. Lack of adequately preserved material has seen the majority of paterinate specimens previously reported from South Australia referred to the genus *Askepasma* and treated under open nomenclature. Large collections of paterinates from the lower Cambrian Wilkawillina, Ajax, and Wirrapowie limestones in the Arrowie Basin, South Australia have prompted redescription of the type species *Askepasma toddense* and the erection of a new species, *Askepasma saproconcha* sp. nov. *Askepasma saproconcha* sp. nov. currently represents the oldest known brachiopod from the lower Cambrian successions in South Australia with a FAD in pre–trilobitic (Terreneuvian, Cambrian Stage 2, lower Atdabanian) strata in the basal part of the Wilkawillina and Wirrapowie limestones. *Askepasma toddense* predominantly occurs in *Abadiella huoi* Zone equivalent strata (Unnamed Cambrian Series 2, Stage 3, middle–upper Atdabanian) in the upper part of the lower Wilkawillina, Wirrapowie, and Ajax limestones. The shell microstructure of *Askepasma* suggests a proximal stem group position within the Brachiopoda and similarities with tommotiid taxa provides further evidence that the ancestry of crown group brachiopods is firmly entrenched within the Tommotiida.

Key words: Brachiopoda, Tommotiida, Paterinida, *Askepasma*, microstructure, Flinders Ranges, Arrowie Basin, lower Cambrian, South Australia.

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